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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,964	09/18/2003	Theodore M. Taylor	108298724US	8350
25096	7590	11/30/2004		
PERKINS COIE LLP PATENT-SEA P.O. BOX 1247 SEATTLE, WA 98111-1247			EXAMINER MCDONALD, SHANTESE L	
			ART UNIT 3723	PAPER NUMBER

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,964

Applicant(s)

TAYLOR ET AL.

Examiner

Shantese L. McDonald

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 9/18/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 26-40 is/are allowed.
- 6) ☐ Claim(s) 1-9, 12-16, 18-25, 41 and 43-48 is/are rejected.
- 7) ☐ Claim(s) 10, 11, 17 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 recites the limitation "the doped polysilicon" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 12-16, 18-25, 41 and 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bogush et al. in view of Herner et al.

Bogush et al. teaches a method for removing material from a microfeature workpiece comprising contacting a polishing pad material with a portion of a microfeature workpiece having a doped silicon material, (col. 3, lines 6-8), disposing a polishing liquid, which includes a surfactant, (col. 4, lines 47-59), which can be non-ionic, or have a non-zero ionicity, (col. 5, lines 36-40), between the doped silicon material and the polishing pad material, moving at least one of the workpiece and the polishing pad material relative to the other while the workpiece contacts the polishing pad material and the polishing liquid, (col. 1, lines 19-39). Bogush et al. also teaches removing material from recesses and

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apertures, (col. 8, lines 11-12), and the polishing liquid including an alkaline, potassium hydroxide or sodium hydroxide, (col. 4, lines 1-34). Bogush also teaches disposing a first polishing liquid adjacent to the silicon material and removing a first portion of the silicon material by chemical mechanical planarization, the first liquid having a first composition, and disposing a second polishing liquid adjacent the silicon material, the second composition being different than the first composition, (col. 7, lines 7-35). Bogush et al. teaches all the limitations of the claims except for the workpiece having different crystalinities and or different dopant concentrations, different levels of amorphousness, the workpiece including a layer of material between the surface and the doped silicon material, and wherein the method further comprises removing the layer of material by contacting the layer with the polishing pad material and the polishing liquid, the polishing process taking place up to about 125 degrees Fahrenheit, the polishing liquid including about 0.001 to about 1.0% surfactant by weight, and the polishing liquid having a surfactant with a CAS registry number of 900-95-9.

Herner et al. teaches a workpiece having different crystalinities and or different dopant concentrations, different levels of amorphousness, (col. 5, lines 21-62), the workpiece including a layer of material between the surface and the doped silicon material, and wherein the method further comprises removing the layer of material by contacting the layer with the polishing pad material and the polishing liquid, (col. 7, lines 6-26). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to utilize the method

of Bogush et al. with a workpiece as taught by Herner et al., in order to more efficiently remove the unwanted silicon material.

It would have been further obvious to have the polishing process taking place up to about 125 degrees Fahrenheit, the polishing liquid including about 0.001 to about 1.0% surfactant by weight, and the polishing liquid having a surfactant with a CAS registry number of 900-95-9, in order to more efficiently remove the doped silicon material, and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Allowable Subject Matter

Claims 10,11,17and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 26-40 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishimura et al. was cited to show another example of a polishing method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantese L. McDonald whose telephone number is (703) 308-8722. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (703) 308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph J. Hail, III
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S.L.M.
November 23, 2004